## (12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

# (19) World Intellectual Property Organization International Bureau





(43) International Publication Date 12 May 2005 (12.05.2005)

### **PCT**

# (10) International Publication Number WO 2005/042306 A2

(51) International Patent Classification<sup>7</sup>:

\_\_\_\_

B60R

(21) International Application Number:

PCT/US2004/035017

(22) International Filing Date: 22 October 2004 (22.10.2004)

(25) Filing Language:

English

(26) Publication Language:

**English** 

(30) Priority Data: 60/513,644

23 October 2003 (23.10.2003) US

- (71) Applicant (for all designated States except US): DELPHI TECHNOLOGIES, INC. [US/US]; P.O. Box 5052, Mail code 480-410-202, Troy, MI 48007-5052 (US).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): BRANDL, Michael, C. [US/US]; 461 Jennifer Lane, Grayslake, IL 60030 (US). BARTHEL, Richard, C. [US/US]; 33030 N. River Road, Libertyville, IL 60048 (US). NOVELLE, Anthony, J. [US/US]; 120 Newton Avenue, Glen Ellyn, IL 60137 (US).
- (74) Agent: WOOD, David, P.; Delphi Technologies, Inc., P.O. Box 5052, Legal Staff-M/C 480-410-202, Troy, MI 48007-5052 (US).

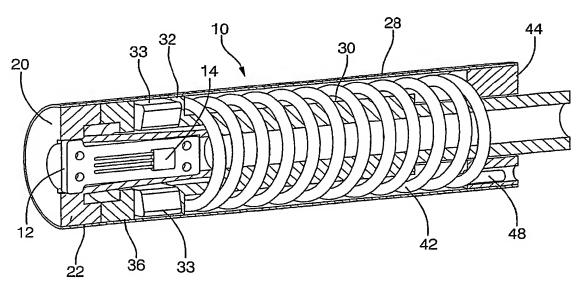
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

#### Published:

 without international search report and to be republished upon receipt of that report

[Continued on next page]

### (54) Title: CONTROL CARTRIDGE AND CONTROL HANDLE INCLUDING SAME



(57) Abstract: A control cartridge has a circuit board that includes a Hall effect sensor, the position of which is fixed in a housing that has a cam. The control cartridge includes a shaft that carries a magnet and that rotates and translates with respect to the housing. The shaft has a cam follower that engages the cam and translates the shaft with respect to the housing when the shaft is rotated with respect to the housing in one direction but not in an opposite direction. The control cartridge is shown as part of a control handle for a motorcycle in which the relative angular position of the shaft with respect to the Hall effect sensor is used to control engine speed manually while the relative axial position of the shaft with respect to the Hall effect sensor is used to deactivate a cruise control.